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ExxonMobil
Refining & Supply

March 30, 2006

Ms. Joan Fleck
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard
Santa Rosa, California 95403

RE: Former Exxon RAS #7-4099/100 Coddington Center, Santa Rosa, California.

Dear Ms. Fleck:

Attached for your review and comment is a copy of the letter report entitled *Recommendation for Case Closure*, dated March 30, 2006, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Petaluma, California, and details closure activities regarding the subject site.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,

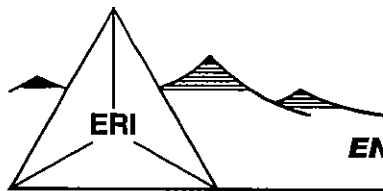


JCS
Jennifer C. Sedlachek
Project Manager

Attachment: ERI's Recommendation for Case Closure, dated March 30, 2006.

cc: w/ attachment
Mr. Paul Lowenthal, City of Santa Rosa Fire Department
Mr. Joseph A. Aldridge, Valero Energy Corporation

w/o attachment
Ms. Paula Sime, Environmental Resolutions, Inc.



ENVIRONMENTAL RESOLUTIONS, INC.

March 30, 2006
ERI 223314.R05

Ms. Jennifer C. Sedlachek
ExxonMobil Refining & Supply – Global Remediation
4096 Piedmont Avenue, #194
Oakland, California 94611

SUBJECT Recommendation for Case Closure
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California

Ms. Sedlachek:

At the request of Exxon Mobil Corporation (Exxon Mobil), Environmental Resolutions, Inc. (ERI) has prepared this Recommendation for Case Closure for the subject site. This report summarizes site background (including previous investigations and remedial actions), site conditions, and plume stability, and presents an evaluation of site conditions relative to the California Regional Water Quality Control Board, North Coast Region (the Regional Board), groundwater cleanup goals.

SITE BACKGROUND

Site Location and Land Use

The site is located on the southwestern corner of the intersection of Guerneville Road and Cleveland Avenue in Santa Rosa, California, as shown on the Site Vicinity Map (Plate 1). The locations of the former and current underground storage tanks (USTs), dispenser islands, and other select site features are shown on the Generalized Site Plan (Plate 2). Exxon Mobil sold the site to Valero Energy Corporation (Valero) in June of 2000. The site is currently owned by BJES Enterprises Inc., and is operated as a Valero-branded service station.

Land use in the immediate vicinity is primarily commercial. The site is bounded by the Coddington Center Mall on the west and south, by Guerneville Road and a Chevron Service Station beyond to the north, and by Cleveland Avenue and a Chevron Oil Stop and Car Wash beyond to the east. Topography in the vicinity of the site is relatively flat. The site has an elevation of approximately 145 feet above mean sea level. The nearest surface water is Paulin Creek located approximately 1,400 feet north of the site.

In 1988, three 8,000-gallon gasoline USTs and associated piping were removed from east side of the property, and one 1,000-gallon used-oil UST was removed from the center of the property (EA, 1990). In 1989, four new 10,000 gallon single-wall USTs and one 1,000 gallon used-oil UST were installed on the west side of the property and the center of the property, respectively. In 1997, the used-oil UST and associated piping, hydraulic hoists, hydraulic tanks, and product piping was removed from the site (EA, 1998).

Site History and Previous Investigations

Soil and groundwater investigations and remediation were conducted at the site between 1988 and 1998 (EA, 1996). In May 1997, the Regional Board concurred with EA Engineering Science and Technology's recommendation that case closure was warranted (RWQCB, 1997). The wells were subsequently abandoned and all drummed soil was disposed at an approved Exxon Mobil disposal facility (EA, 1998).

As part of a baseline investigation conducted by Valero, two Hydropunch soil borings (B1 and B2) were advanced in December 1998. Concentrations of methyl tertiary butyl ether (MTBE) (up to 72 micrograms per liter [µg/L]) were reported in the grab groundwater samples (EA, 1999). In 2001, the Regional Board

requested the installation of groundwater monitoring wells to monitor for the presence of MTBE in groundwater (RWQCB, 2001).

In April 2000, ERI observed on-site field activities performed by Environ Corporation (Environ) at the request and direction of Valero. Environ advanced one Geoprobe boring (GP1). Groundwater samples were collected and analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE. Concentrations of TPHg (130 µg/L) and xylenes (2.2 µg/L) were the only constituents detected above the laboratory reporting limit (ERI, 2000).

In April 2002, ERI drilled four soil borings completed as groundwater monitoring wells MW1 through MW4 (ERI, 2002). Well construction details are provided in Table 1. Concentrations of total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); oxygenated compounds (including MTBE); and ethanol were not detected in the soil samples at concentrations at or above the laboratory reporting limit. Soil sample analytical results are summarized in Table 2.

In March 2006, ERI updated the sensitive receptor survey to locate municipal and domestic water wells within a 2,000-foot radius of the site. A review of Department of Water Resource (DWR) files revealed 24 wells were installed between 1951 and 1967, and two wells were installed in 1977 and 1980. A review of the City of Santa Rosa Public Works files revealed five properties with probable wells and 42 properties with known wells within the search radius. Only three wells were identified by both the City of Santa Rosa and DWR; the wells were installed in 1956, 1977, and 1980. A door to door survey was performed by ERI in 2004; of the 11 well locations confirmed, three wells are in use, seven wells are not in use, and one well was destroyed. The nearest known downgradient well is located approximately 350 feet west of the site on West Steele Lane. The community of Santa Rosa obtains its drinking water from surface water and municipal groundwater wells. ERI performs a Sensitive Receptor Survey (SRS) annually.

Groundwater monitoring has been conducted semi-annually since 2002. Groundwater monitoring data are provided in Tables 3A and 3B. Select groundwater analytical results from the most recent quarterly groundwater monitoring event are presented on Plate 3.

Regional Geology and Hydrogeology

The site is located in the central part of Sonoma County, approximately 2 miles northwest of downtown Santa Rosa. The site is located in the northwest-southeast trending Santa Rosa Valley which is part of the central Coast Ranges Geomorphic province. The Santa Rosa Valley consists primarily of Quaternary basin and alluvial fan deposits consisting of clay and silty clay and fine sands, silt, silty clay, coarse sand and gravel, respectively.

The site is located in the Santa Rosa Plain groundwater sub-basin which is part of the Santa Rosa Groundwater Basin. Groundwater here occurs under unconfined conditions. The site is mapped as not being located in a natural recharge area (DWR, 1975). The alluvial aquifer appears to be recharged in stream channel deposits. The alluvial fan deposits, in the Santa Rosa Plain are not permeable enough to act as recharge areas (DWR, 1982).

Site Geology and Hydrogeology

Logs from previous soil borings at the site indicate that sediments underlying the site consist predominantly of silty clay, clayey sand, and sandy gravel.

Groundwater monitoring and sampling has been performed at the site semi-annually since July 2002. Groundwater elevations are included on Table 3A. Groundwater has been encountered beneath the site at depths ranging from approximately 5 feet below ground surface (fbgs) to 10 fbgs. The average groundwater flow direction between 2002 and 2006 was to the northwest. The most recent groundwater data for January 18, 2006, indicate that the groundwater flow direction is toward the northwest as presented on Plate 4. A rose diagram showing groundwater flow directions is also included on Plate 4. Hydrographs for groundwater monitoring wells MW1 through MW4 showing groundwater elevations and MTBE concentrations over time are presented as Graphs 1 through 4, respectively.

SITE CONDITIONS

Residual Petroleum Hydrocarbon Concentrations in Soil

Five soil samples were collected during the installation of groundwater monitoring wells MW1 through MW4. Concentrations of TPHg, BTEX, oxygenated compounds (including MTBE), 1,2-dichloroethane, 1,2-dibromoethane, and ethanol, were not detected in the soil samples at concentrations at or above the laboratory method reporting limit.

Dissolved Petroleum Hydrocarbon Concentrations in Groundwater

Groundwater monitoring and sampling has been conducted since 2002. Groundwater analytical results are summarized in Tables 3A and 3B. Select analytical results from the most recent groundwater monitoring event are presented on Plate 3.

Since 2002, dissolved-phase hydrocarbon concentrations were detected in groundwater monitoring wells at concentrations up to 103 µg/L for TPHg (MW1, 5/10/02), up to 0.9 for ethylbenzene (MW3, 7/28/05), and up to 1.1 µg/L for xylenes (MW1, 1/18/06). Concentrations of MTBE were also detected, up to 94.40 µg/L (by EPA Method 8260, MW1, 5/10/02). Concentrations of tertiary butyl alcohol (TBA) were detected in one groundwater sampling event at 19.6 µg/L (MW1, 2/10/03). Concentrations of benzene and toluene have not been detected in any of the groundwater samples collected from wells MW1 through MW4.

Currently, xylenes (1.1 µg/L) and MTBE (24 µg/L) are the only constituents present in groundwater samples collected from well MW1. Currently, concentrations of TPHg, BTEX, and oxygenated compounds (including MTBE) have not been detected in groundwater samples collected from wells MW2 through MW4.

PLUME STABILITY

Dissolved Petroleum Hydrocarbon Distribution

The primary source of MTBE is assumed to be from the current UST field (located on the western portion of the site). The former USTs (located on the eastern portion of the site) were removed in 1988 when MTBE was not widely used in gasoline.

Concentrations of TPHg and MTBE in groundwater have decreased in all of the groundwater monitoring wells (see Graphs 1 through 4 for wells MW1 through MW4, respectively). Since May 2002, when the wells were installed, concentrations of TPHg, BTEX, and MTBE in groundwater monitoring wells MW3, MW4, and MW5 have generally remained less than the stated laboratory reporting limit. Concentrations of TPHg and MTBE have steadily decreased in monitoring well MW1, as illustrated in Graph 1.

EVALUATION OF SITE CONDITIONS RELATIVE TO GROUNDWATER CLEANUP GOALS

The Regional Board groundwater cleanup goals for groundwater were compared with groundwater sample analytical results collected since 2002. Specific Regional Board goals and analytical results (bold when goals were exceeded) are presented on Table 3.

For a low risk groundwater case to be closed, the Regional Board has designated the following groundwater clean-up goals for common petroleum hydrocarbons:

- Benzene at 0.15 µg/L (laboratory reporting limit 0.5 µg/L)
- Toluene at 40 µg/L
- Ethylbenzene at 30 µg/L
- Total xylenes at 20 µg/L

- MTBE at 5 µg/L
- TPHg at 50 µg/L (laboratory reporting limit 50 µg/L)
- TBA at 12 µg/L

Groundwater Conditions

Based on groundwater conditions since 2002, the BTEX concentrations are below the Regional Board cleanup goals for each constituent. Concentrations of TPHg have not exceeded the Regional Board cleanup goals since 2005. A single detection of TBA was reported once, in monitoring well MW1 (19.6 µg/L, 2/10/03).

Based on groundwater conditions since 2002, MTBE concentrations exceed the Regional Board cleanup goals in well MW1 (24 µg/L, 1/8/06) (located in the vicinity of the current USTs). Concentrations of MTBE have steadily declined in this well as shown on Graph 5. If concentrations of MTBE continue to decline linearly, then the Regional Board's cleanup goal for MTBE is projected to be attained by early 2008. A trend line is presented on Graph 5.

CONCLUSIONS

Based on the following criteria, it is ERI's opinion that residual and dissolved-phase hydrocarbons in soil and groundwater underlying the subject site have been identified.

- Residual hydrocarbon concentrations were not reported at or above the laboratory reporting limit in the soil samples collected from borings MW1 through MW4.
- Concentrations of TPH, BTEX, MTBE and oxygenated compounds are below the Regional Board clean-up goals for groundwater samples collected from groundwater monitoring wells MW2 through MW4.
- Concentrations of TPH and BTEX are below the Regional Board clean-up goals for groundwater samples collected from groundwater monitoring well MW1.
- Concentrations of TBA were not reported at or above the laboratory reporting limit in groundwater samples collected from MW1 since August 2003.
- Current concentrations of MTBE in groundwater exceed the Regional Board clean-up goals in monitoring well MW1 (located in the vicinity of the current UST field);
- Concentrations of MTBE in groundwater that are above Regional Board clean-up goals are limited in extent and decreasing (only groundwater monitoring well MW1). The clean-up goal for MTBE is projected to be attained by early 2008.
- The nearest known downgradient water well is located approximately 350 feet west of the site on West Steele Lane.
- The nearest surface water is Paulin Creek located 1,400 feet north of the site and is crossgradient to the site.

RECOMMENDATIONS

Based on the previous environmental investigations and current site conditions, ERI does not recommend additional assessment activities. ERI recommends that the subject site be reviewed for case closure. ERI also recommends that Exxon Mobil destroy the existing monitoring wells or transfer ownership of the monitoring wells to the current property owner.

DOCUMENT DISTRIBUTION

ERI recommends forwarding copies of this report to:

Ms. Joan Fleck
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

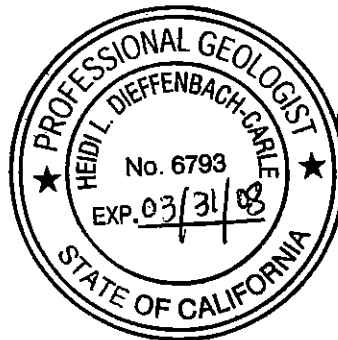
Mr. Paul Lowenthal
City of Santa Rosa Fire Department
955 Sonoma Avenue
Santa Rosa, California 95404

Mr. Joseph A. Aldridge
Valero Energy Corporation
685 West Third Street
Hanford, California 93230

LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for Exxon Mobil, and any reliance on this report by third parties shall be at such party's sole risk.

Please call Ms. Paula Sime, ERI's project manager for this site, at (707) 766-2000 with any questions regarding this report.



Sincerely,
Environmental Resolutions, Inc.

Paula Sime
Project Manager

Heidi L. Dieffenbach-Carle
P.G. 6793

Attachments: References

Table 1:	Well Construction Details
Table 2:	Soil Sample Analytical Results
Table 3A:	Cumulative Groundwater Monitoring and Sampling Data
Table 3B:	Additional Cumulative Groundwater Monitoring and Sampling Data
Plate 1:	Site Vicinity Map
Plate 2:	Generalized Site Plan
Plate 3:	Select Groundwater Analytical Results, January 18, 2006
Plate 4:	Groundwater Elevation Map, January 18, 2006
Graph 1:	Well MW1 Hydrograph
Graph 2:	Well MW2 Hydrograph
Graph 3:	Well MW3 Hydrograph
Graph 4:	Well MW4 Hydrograph
Graph 5:	Well MW1 – MTBE Trend

TABLE 1
WELL CONSTRUCTION DETAILS
Former Exxon Service Station 7-4099
100 Coddington Center
Santa Rosa, California
(Page 1 of 1)

Well ID	Date Well Installed	TOC Elevation (fmsl)	Borehole Diameter (inches)	Total Depth of Boring (fbgs)	Well Depth (fbgs)	Well Casing Diameter (inches)	Well Casing Material	Screened Interval (fbgs)	Slot Size (inches)	Filter Pack Interval (fbgs)	Filter Pack Material
MW1	04/25/02	143.70	8	20	19	2	PVC	4-19	0.040	3-20	#3 Sand
MW2	04/25/02	144.72	8	20	20	2	PVC	4-20	0.040	3-20	#3 Sand
MW3	04/25/02	143.10	8	20	19	2	PVC	4-19	0.040	3-20	#3 Sand
MW4	04/25/02	145.34	8	20	20	2	PVC	4-20	0.040	3-20	#3 Sand

Notes:
TOC = Top of well casing elevation; datum is mean sea level.
fmsl = Feet above mean sea level.
fbgs = Feet below ground surface.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
Former Exxon Service Station 7-4099
100 Coddington Cneter
Santa Rosa, California
(Page 1 of 1)

Well ID #	Sampling Date	Sample Depth (feet bgs)	TPHg	MTBE	B	T	E	X	TBA	TAME	DIPE	ETBE	Total Lead	Select VOCs	Ethanol	1,2-DCA	Ethylene dibromide
			mg/Kg														
S-5-MW1	04/25/02	5	<5.0	<0.025	<0.050	<0.050	<0.050	<0.050	<0.50	<0.025	<0.025	<0.025	—	—	<5.0	<0.025	<0.025
S-5-MW2	04/28/02	5	<5.0	<0.025	<0.050	<0.050	<0.050	<0.050	<0.50	<0.025	<0.025	<0.025	—	—	<5.0	<0.025	<0.025
S-8-MW2	04/26/02	8	<5.0	<0.025	<0.050	<0.050	<0.050	<0.050	<0.50	<0.025	<0.025	<0.025	—	—	<5.0	<0.025	<0.025
S-5-MW3	04/25/02	5	<5.0	<0.025	<0.050	<0.050	<0.050	<0.050	<0.50	<0.025	<0.025	<0.025	—	—	<5.0	<0.025	<0.025
S-5-MW4	04/26/02	5	<5.0	<0.025	<0.050	<0.050	<0.050	<0.050	<0.50	<0.025	<0.025	<0.025	—	—	<5.0	<0.025	<0.025
SP1-(1-4)	04/26/02	5	<1.0	—	<0.0050a	<0.0050a	<0.0050a	<0.0050a	—	—	—	—	11	NDb	—	<50	—

Notes:	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015 (modified).
TPHg	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
MTBE	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
BTEX	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
TBA	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TAME	=	Di-Isopropyl ether analyzed using EPA Method 8260B.
DIPE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
ETBE	=	Total lead analyzed using EPA Method 6010B.
Total Lead	=	Volatile organic compounds analyzed using EPA Method 8260B.
VOCs	=	Ethanol analyzed using EPA Method 8260B.
Ethanol	=	1,2 Dichloroethane analyzed using EPA Method 8260B.
1,2-DCA	=	Ethylene dibromide analyzed using EPA Method 8260B.
Ethylene Dibromide	=	Less than the stated laboratory detection limit.
<	=	Not analyzed or sampled.
ND	=	No analytes detected at concentrations at or above laboratory detection limits. See laboratory report.
bgs	=	Below ground surface.
mg/Kg	=	Milligrams per kilogram.
a	=	BTEX analyzed using EPA Method 8021B.
b	=	VOCs analyzed using EPA Method 8021B.

TABLE 3A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-4099
100 Coddington Center
Santa Rosa, California
(Page 1 of 2)

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW1	05/10/02	143.70	8.25	135.45	NLPH	103	94.40	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a
MW1	08/26/02	143.70	9.27	134.43	NLPH	<50.0	90.1	<0.5	<0.5	<0.5	<0.5
MW1	02/10/03	143.70	7.11	136.59	NLPH	<50.0	35.9	<0.5	<0.5	<0.5	<0.5
MW1	08/25/03	143.70	9.11	134.59	NLPH	87.9	57.7	<0.50	<0.5	<0.5	<0.5
MW1	02/02/04	143.70	7.15	136.55	NLPH	52.9	56.8	<0.50	<0.5	<0.5	<0.5
MW1	07/12/04	143.70	9.03	134.67	NLPH	75.0	54.3	<0.50	<0.5	<0.5	<0.5
MW1	01/17/05	143.70	6.44	137.26	NLPH	<50.0	48.7	<0.50	<0.5	<0.5	0.5
MW1	07/28/05	143.70	8.50	135.20	NLPH	<50.0	44.3	<0.50	<0.5	<0.5	0.5
MW1	01/18/06	143.70	6.25	137.45	NLPH	<50	24	<0.50	<0.50	<0.50	1.1
MW2	05/10/02	144.72	9.19	135.53	NLPH	<50.0	0.75	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a
MW2	08/26/02	144.72	10.24	134.48	NLPH	<50.0	<0.50	<0.5	<0.5	<0.5	<0.5
MW2	02/10/03	144.72	7.98	136.74	NLPH	<50.0	0.70	<0.5	<0.5	<0.5	<0.5
MW2	08/25/03	144.72	10.05	134.67	NLPH	<50.0	0.70	<0.50	<0.5	<0.5	<0.5
MW2	02/02/04	144.72	8.05	136.67	NLPH	<50.0	0.60	<0.50	<0.5	<0.5	<0.5
MW2	07/12/04	144.72	9.95	134.77	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW2	01/17/05	144.72	7.19	137.53	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	1
MW2	07/28/05	144.72	9.43	135.29	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW2	01/18/06	144.72	7.00	137.72	NLPH	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	05/10/02	143.10	7.31	135.79	NLPH	<50.0	<0.50	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a
MW3	08/26/02	143.10	8.37	134.73	NLPH	<50.0	<0.50	<0.5	<0.5	<0.5	<0.5
MW3	02/10/03	143.10	6.16	136.94	NLPH	<50.0	<0.50	<0.5	<0.5	<0.5	<0.5
MW3	08/25/03	143.10	8.18	134.92	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW3	02/02/04	143.10	6.17	136.93	NLPH	<50.0	0.80	<0.50	<0.5	<0.5	<0.5
MW3	07/12/04	143.10	8.10	135.00	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW3	01/17/05	143.10	5.54	137.56	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW3	07/28/05	143.10	7.57	135.53	NLPH	<50.0	<0.50	<0.50	<0.5	0.9	<0.5
MW3	01/18/06	143.10	5.32	137.78	NLPH	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW4	05/10/02	145.34	8.78	136.56	NLPH	<50.0	<0.50	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a	<0.5 / <0.50a
MW4	08/26/02	145.34	9.77	135.57	NLPH	<50.0	<0.50	<0.5	<0.5	<0.5	0.8
MW4	02/10/03	145.34	7.56	137.78	NLPH	<50.0	<0.50	<0.5	<0.5	<0.5	<0.5
MW4	08/25/03	145.34	9.67	135.67	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW4	02/02/04	145.34	7.13	138.21	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW4	07/12/04	145.34	9.52	135.82	NLPH	95.0	<0.50	<0.50	<0.5	<0.5	<0.5

TABLE 3A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-4099
100 Coddington Center
Santa Rosa, California
(Page 2 of 2)

Well	Sampling	TOC	DTW	GW Elev.	SUBJ	TPHg	MTBE	B	T	E	X
MW4	01/17/05	145.34	6.86	138.48	NLPH	<50.0	<0.50	<0.50	<0.5	<0.5	<0.5
MW4	07/28/05	145.34	8.99	136.35	NLPH	<50.0	<0.50	<0.50	<0.5	0.6	<0.5
MW4	01/18/06	145.34	6.61	138.73	NLPH	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Regional Board Water Quality Objective						50	5	0.15	40	30	20

Notes:		
SUBJ	=	Results of subjective evaluation.
NLPH	=	No liquid-phase hydrocarbons present in well.
TOC	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethane analyzed using EPA Method 8260B.
DIPE	=	Di-Isopropyl ether analyzed using EPA Method 8260B.
Other VOCs	=	Volatile organic compounds analyzed using EPA Method 8260B; see laboratory report for complete list.
µg/L	=	Micrograms per liter.
ND	=	Not detected at or above the laboratory reporting limit. See laboratory analytical report for specific reporting limits.
<	=	Less than the stated laboratory reporting limit.
—	=	Not measured/Not analyzed.
a	=	Analyzed using EPA Method 8260B.
b	=	sec-Butylbenzene.
c	=	4-Methyl-2-pentanone.
d	=	1,3,5-Trimethylbenzene.

TABLE 3B
ADDITIONAL CUMMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-4099
100 Coddington Center
Santa Rosa, California
(Page 1 of 2)

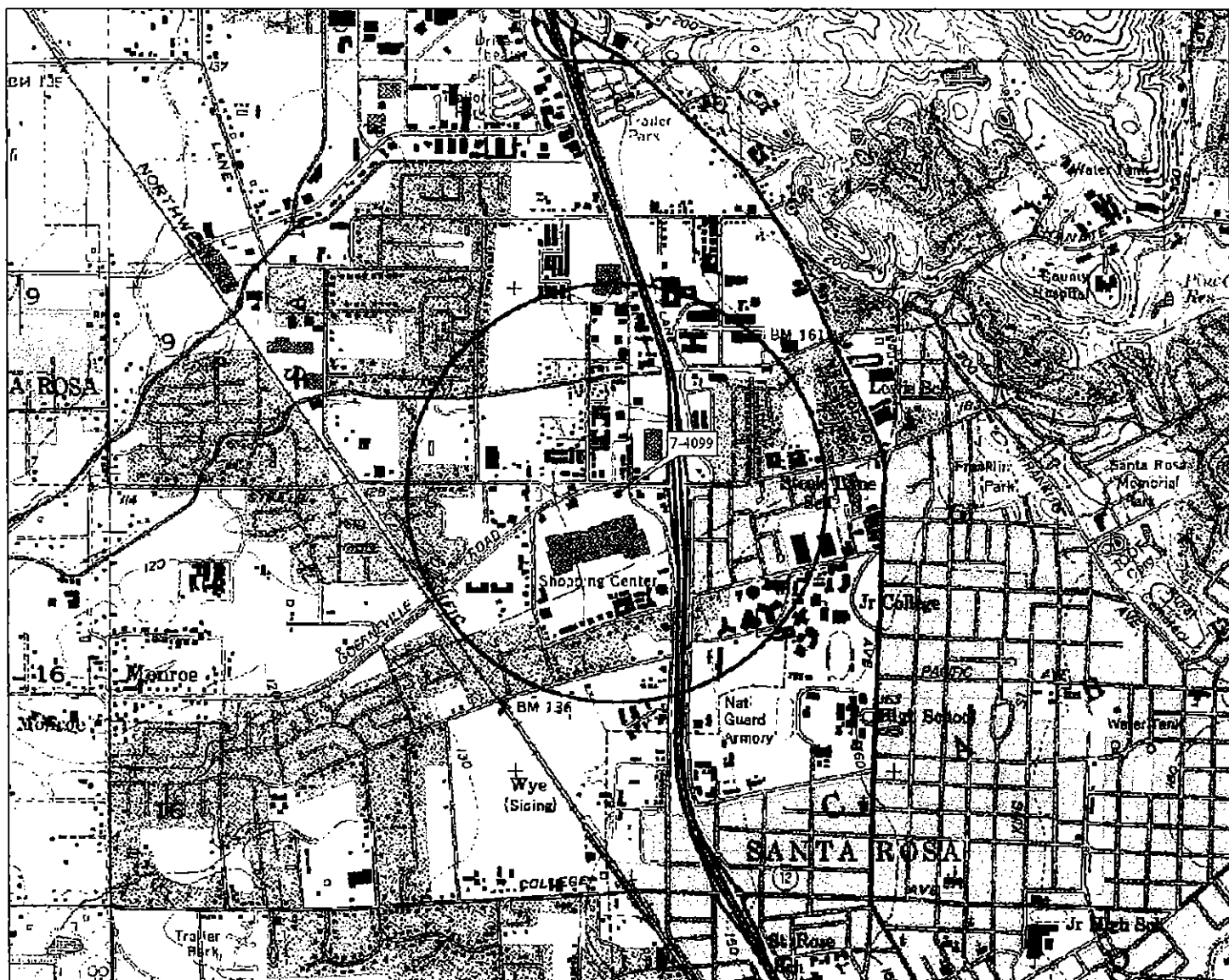
Well ID	Sampling Date	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Other VOCs (µg/L)
MW1	05/10/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW1	08/26/02	<0.50	<0.50	<10.0	—	—	<0.50	—	—
MW1	02/10/03	<0.50	<0.50	19.6	<0.50	<0.50	<0.50	—	—
MW1	08/25/03	<0.50	<0.50	<10.0b	<0.50	<0.50	<0.50	—	1.40b,13.4c,1.30d
MW1	02/02/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW1	07/12/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW1	01/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW1	07/28/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW1	01/18/06	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<100	—
MW2	05/10/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW2	08/26/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW2	02/10/03	<0.50	<0.50	<10.0	—	—	<0.50	—	—
MW2	08/25/03	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW2	02/02/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW2	07/12/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW2	01/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW2	07/28/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW2	01/18/06	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<100	—
MW3	05/10/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW3	08/26/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW3	02/10/03	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW3	08/25/03	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW3	02/02/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW3	07/12/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW3	01/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW3	07/28/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	—
MW3	01/18/06	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<100	—
MW4	05/10/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW4	08/26/02	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW4	02/10/03	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—
MW4	08/25/03	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	ND
MW4	02/02/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—	—

TABLE 3B
ADDITIONAL CUMMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-4099
100 Coddington Center
Santa Rosa, California
(Page 2 of 2)

MW4	07/12/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	---
MW4	01/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	---
MW4	07/28/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<0.50	---
MW4	01/18/06	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<100	---

Regional Board									
Water Quality Objective		---	---	12	0.02	0.40	---	---	260 ^b , 120 ^c , 330 ^d

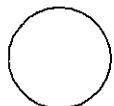
Notes:		
SUBJ	=	Results of subjective evaluation.
NLPH	=	No liquid-phase hydrocarbons present in well.
TOC	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethane analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
Other VOCs	=	Volatile organic compounds analyzed using EPA Method 8260B; see laboratory report for complete list.
µg/L	=	Micrograms per liter.
ND	=	Not detected at or above the laboratory reporting limit. See laboratory analytical report for specific reporting limits.
<	=	Less than the stated laboratory reporting limit.
---	=	Not measured/Not analyzed/Not established.
a	=	Analyzed using EPA Method 8260B.
b	=	sec-Butylbenzene.
c	=	4-Methyl-2-pentanone.
d	=	1,3,5-Trimethylbenzene.



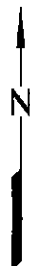
LD TopGrade Copyright © 1999 DeLorme Yarmouth, ME 04094 Source Entry: USGS

450 ft Scale 1 : 12,500 Detail 1:4 Datum: WG84

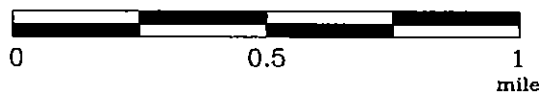
EXPLANATION



1/2-mile radius circle



APPROXIMATE SCALE



SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads



SITE VICINITY MAP

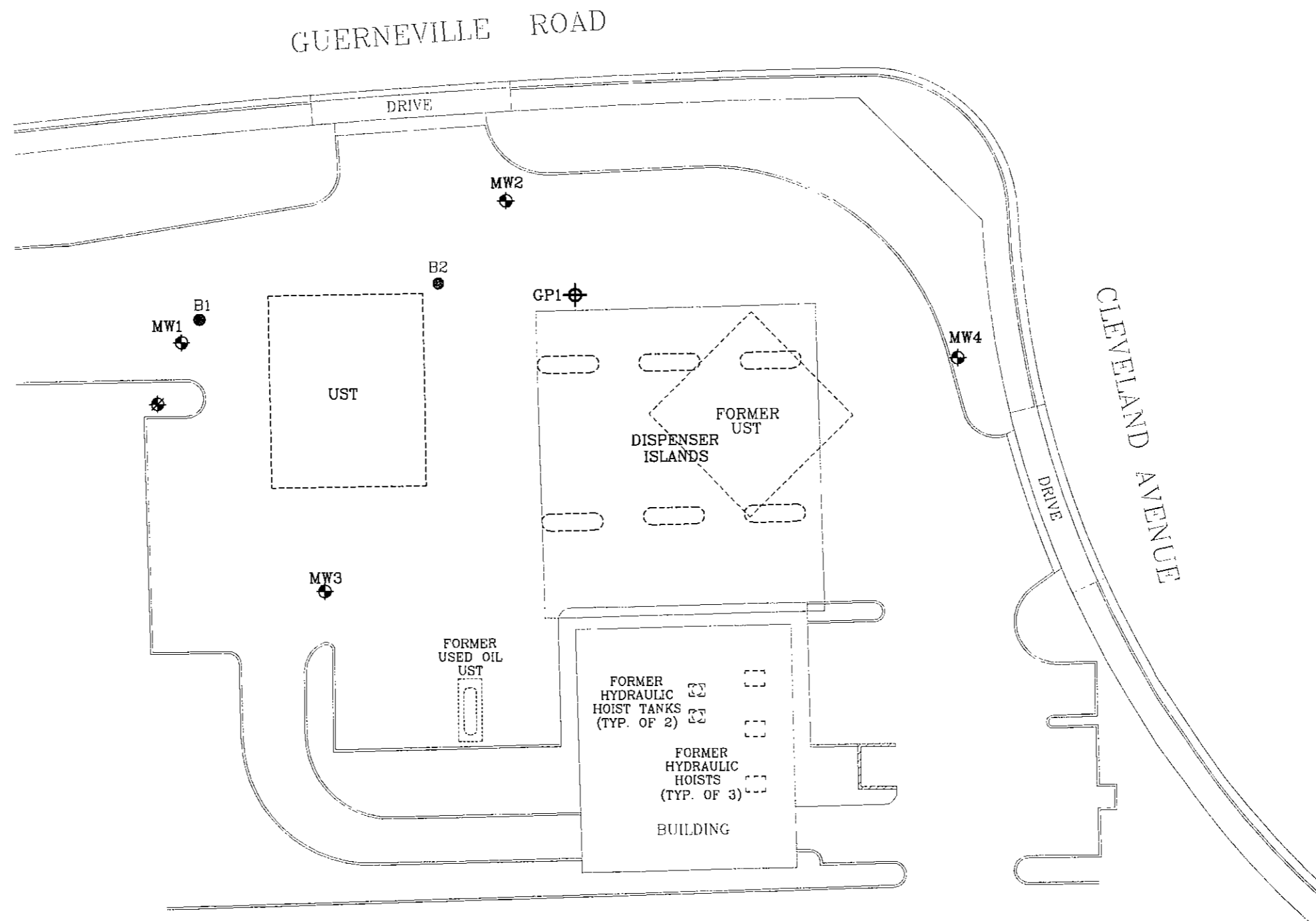
FORMER EXXON SERVICE STATION 7-4099
100 Coddington Center
Santa Rosa, California

PROJECT NO.

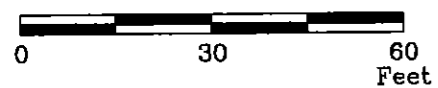
2233

PLATE

1



APPROXIMATE SCALE



FN 22330003



GENERALIZED SITE PLAN

FORMER
EXXON SERVICE STATION 7-4099
100 Coddington Center
Santa Rosa, California

EXPLANATION

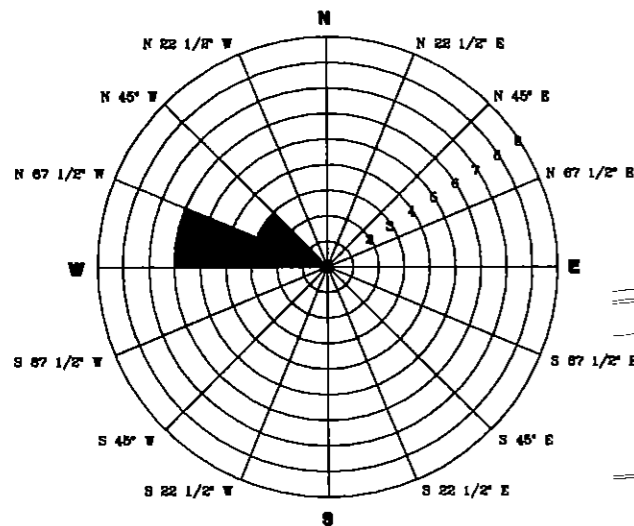
MW4
⊕ Groundwater Monitoring Well

B2
● Soil Boring

GP1
⊕ Direct Push Sample

PROJECT NO.
2233

PLATE
2



N Compass Direction
9 Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.

Nine data points from 5/10/02 through 1/18/06 shown.

GUERNEVILLE ROAD

DRIVE

MW2
137.8
137.72

138.0

138.2

138.4

138.6

MW4
138.73
138.6

MW1
137.45

UST

137.6

MW3
137.8
137.78

FORMER
USED OIL
UST

FORMER
HYDRAULIC
HOIST TANKS
(TYP. OF 2)
BUILDING
FORMER
HYDRAULIC
HOISTS
(TYP. OF 3)

138.0

138.2

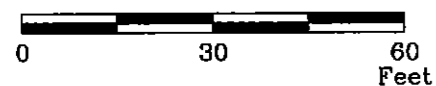
138.4

138.6

DRIVE

CLEVELAND AVENUE

APPROXIMATE SCALE



138.6 -----Line of Equal Groundwater Elevation;
datum is mean sea level

FN 22330003_QM

GROUNDWATER ELEVATION MAP

January 18, 2006

FORMER EXXON SERVICE STATION 7-4099
100 Coddington Center
Santa Rosa, California

EXPLANATION

MW4



Groundwater Monitoring Well

138.73

Groundwater elevation in feet;
datum is mean sea level

PROJECT NO.

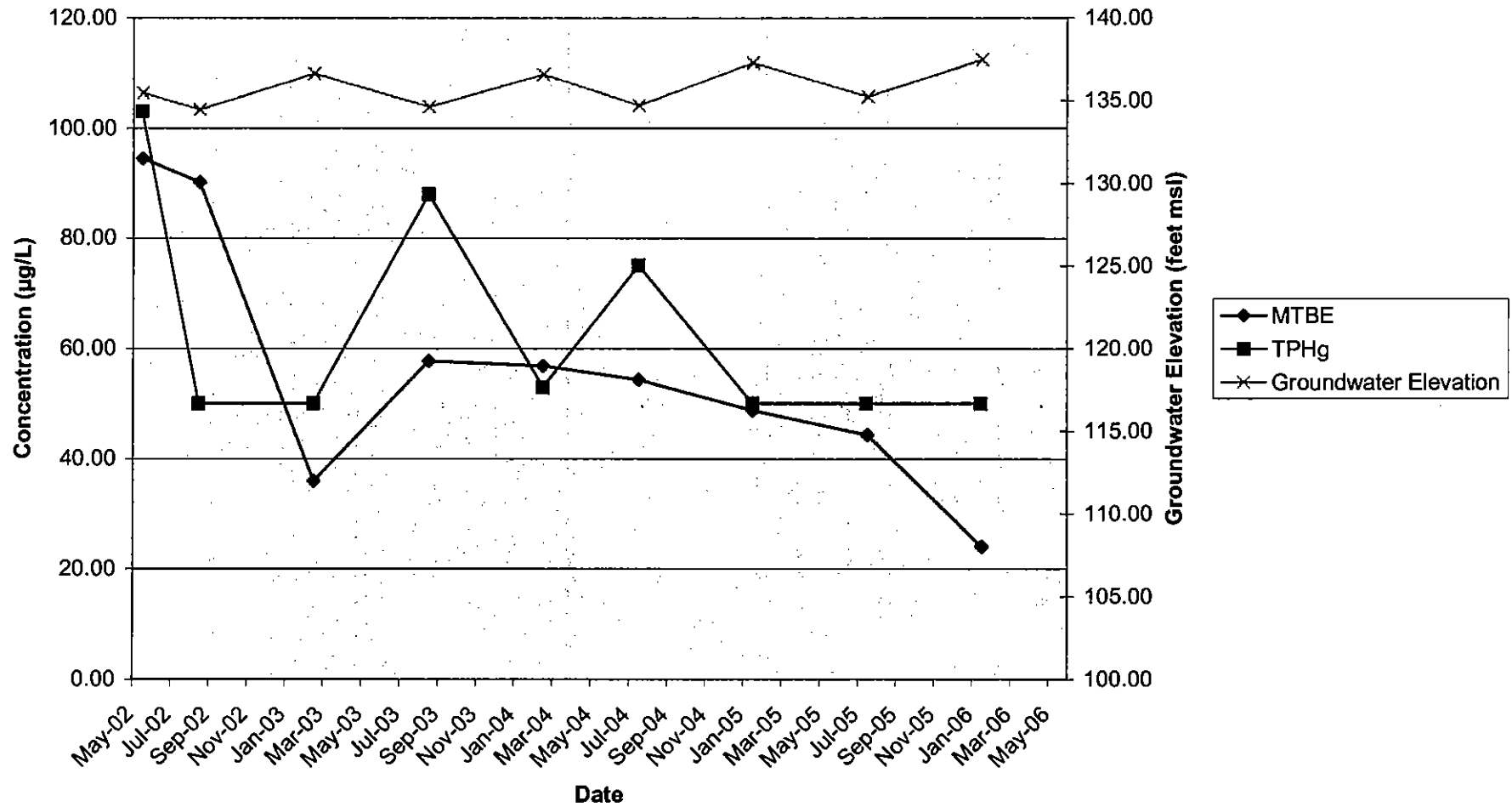
2233

PLATE

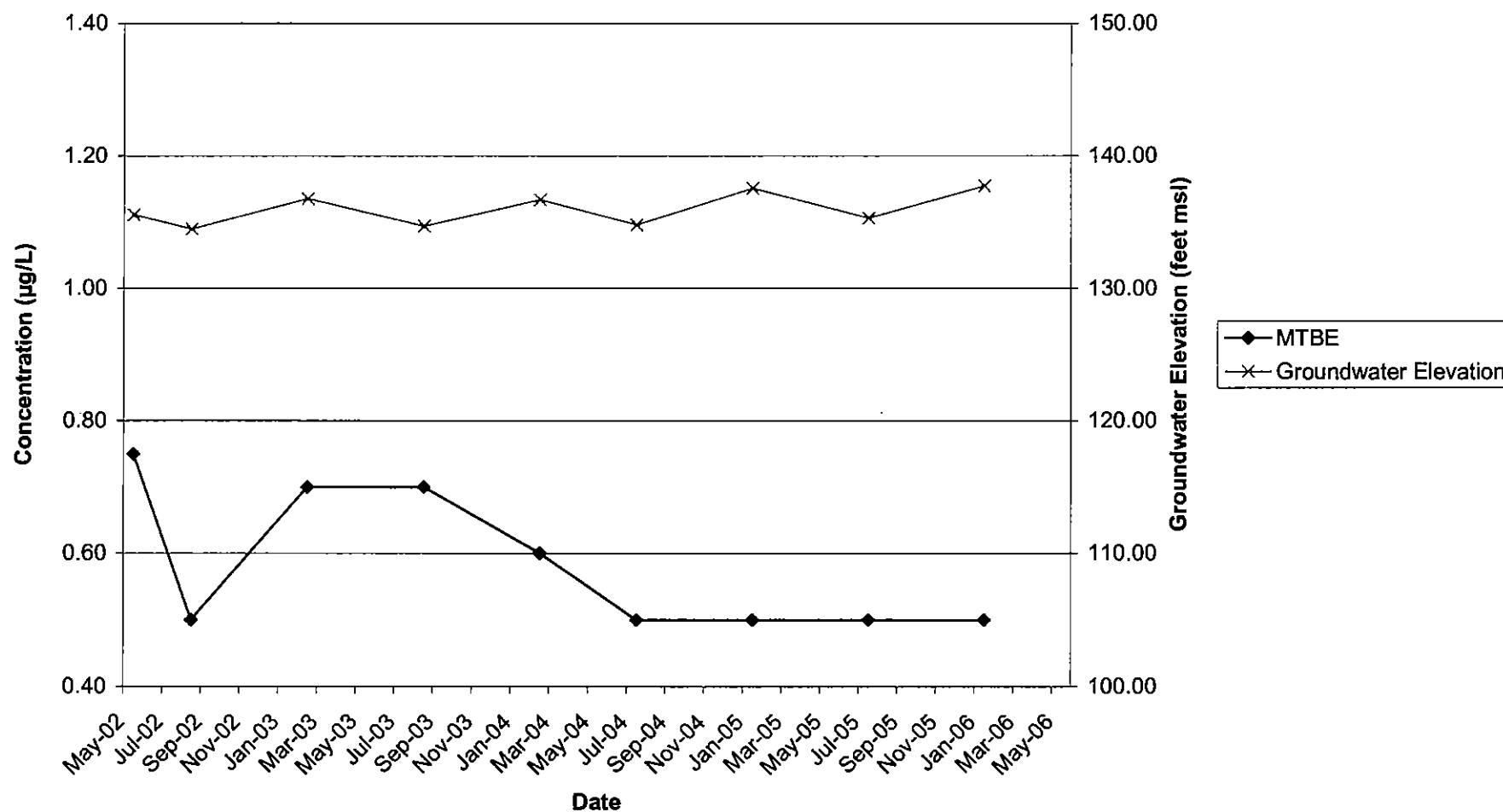
4



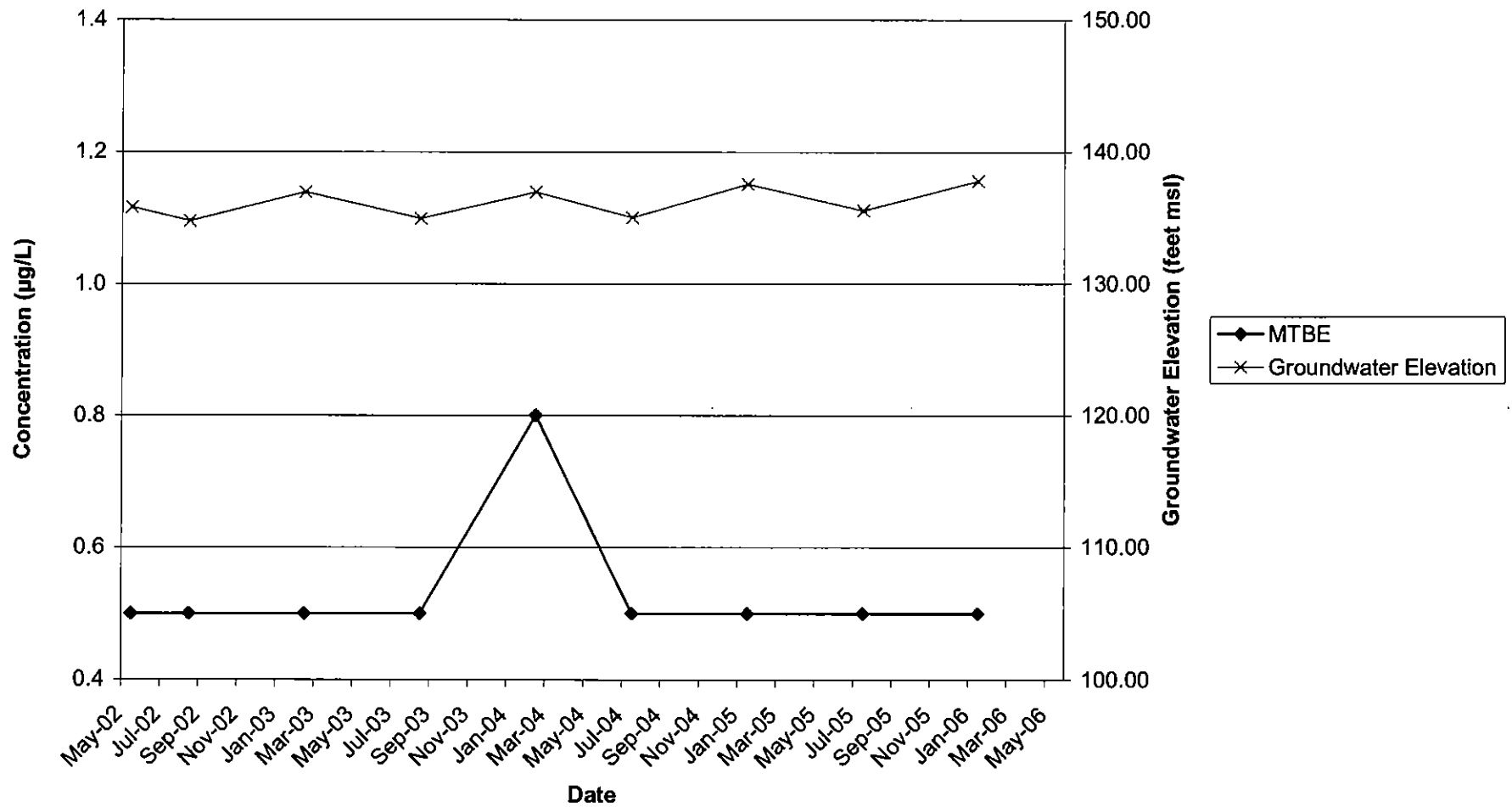
GRAPH 1
Well MW1 Hydrograph
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California



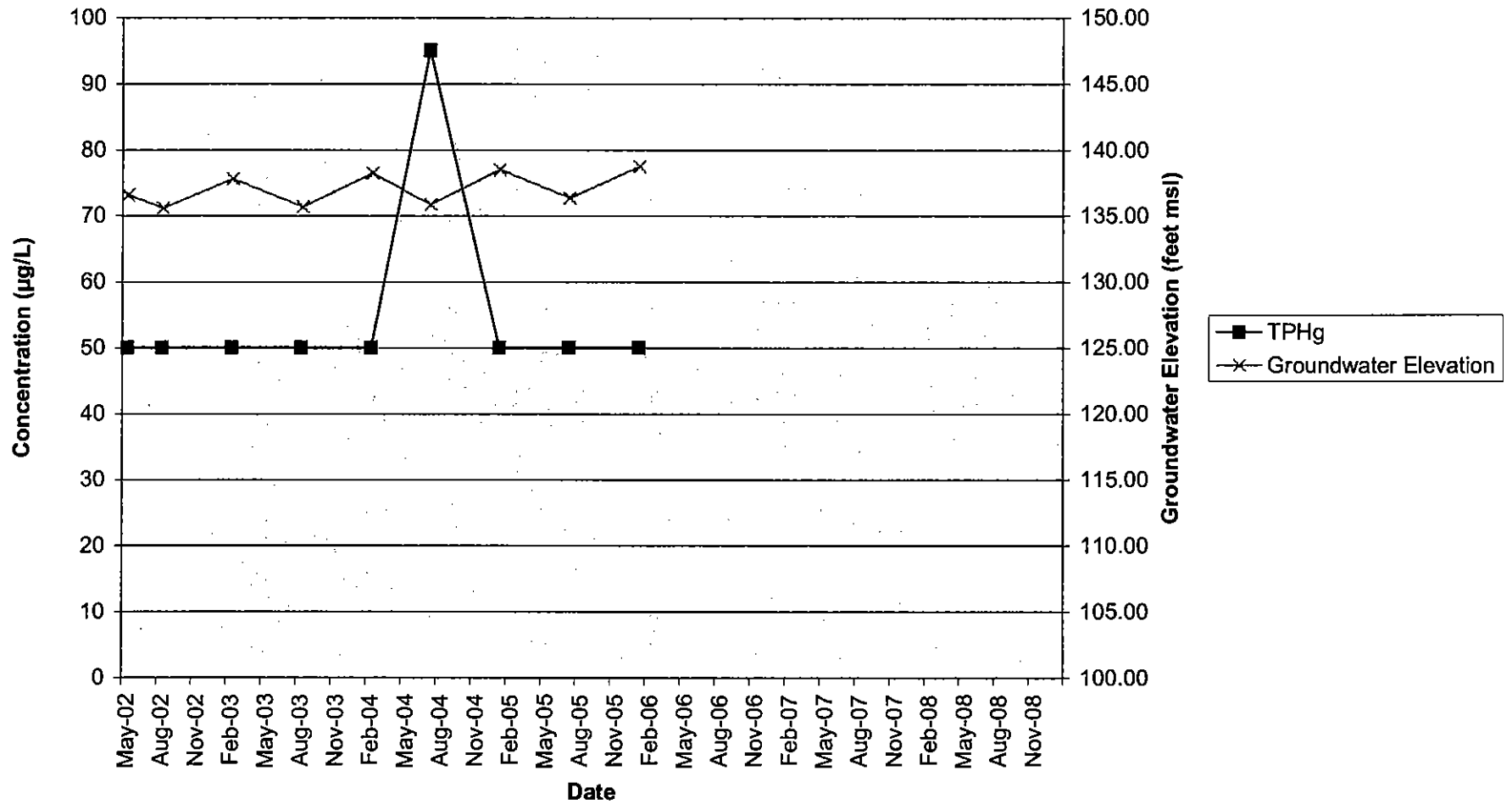
GRAPH 2
Well MW2 Hydrograph
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California



GRAPH 3
Well MW3 Hydrograph
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California



GRAPH 4
Well MW4 Hydrograph
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California



GRAPH 5
Well MW1 - MTBE Trend
Former Exxon Service Station 7-4099
100 Coddington Center, Santa Rosa, California

